

UNIVERSITI TEKNOLOGI MARA

**DEVELOPMENT AND VALIDATION OF A NUTRITION
EDUCATION MODULE FOR SHIFT WORKERS**

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ABSTRACT

Shift work often affects people's health, especially regarding eating habits and sleep quality. Many shift workers struggle with irregular mealtimes, poor dietary habits, and low energy during working hours. Although many nutrition guidelines are widely available, most of them do not consider the unique challenges faced by this population. To help address this gap, this study focused on developing a nutrition education module explicitly tailored for shift workers in Malaysia, which experts will then validate. The module, titled "Nutrition Guide for Shift Workers: Eat Well to Sleep Well", was designed using evidence from a systematic literature review and based on local dietary guidelines. It includes practical advice and meal ideas that Malaysians typically prefer, with simple visuals to help users make better food choices based on their work schedules. Five dietetics experts were invited to review the content using content and face validity tools to evaluate the quality of the module. The results showed strong agreement on the relevance of the content with the S-CVI score of 0.867, but some aspects of the face validity were rated lower; hence, the S-FVI score was 0.65. The low score of S-FVI suggests that the module could still be improved for better readability and accessibility. One limitation of the study is that future work will be needed to refine and implement it more widely. Overall, this study offers a valuable foundation for creating practical nutrition resources that better support the health of shift workers.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Shift work has become more common in many essential sectors like healthcare, manufacturing, security, and transportation. This type of work usually involves working schedules outside the usual 9-to-5 hours, including night shifts, early morning shifts, or rotating shifts (Bolino et al., 2020). Although it is important to maintain 24-hour operations, shift work has been linked to several health concerns due to disruption of circadian rhythms (Fishbein et al., 2021). When the sleep-wake cycles and eating patterns are disrupted, it can lead to problems like fatigue, poor sleep quality, reduced concentration, metabolic disturbances, and an increased risk of chronic disease.

One of the most noticeable effects of shift work is on their eating habits. Studies have found that shift workers often have a habit of skipping meals, eating irregularly, relying heavily on processed and high-calorie foods, and drinking more caffeine than during regular hours (Souza et al., 2018; Fitzhugh & Gibson, 2024). These habits are often not by choice, but due to the nature of shift work, where there is limited access to healthy food options (Khalafehnilsaz et al., 2024). Hence, it is important for tailored nutritional education to address the unique challenges encountered by shift workers.

Although there is no official data regarding the exact number of shift workers in Malaysia, the growing number of hospitals, clinics, factories, and 24-hour services clearly shows that this particular group is expanding. Shift workers often struggle with sleep disturbances, reduced focus during working hours, and limited time to